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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,272	11/26/2001	Roel Van Woudenberg	NL 010154	8820

24737 7590 02/18/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT PAPER NUMBER

2653

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/994,272	VAN Woudenberg, Roel	
	Examiner	Art Unit	
	Aristotelis M Psitos	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-26 is/are pending in the application.
- 4a) Of the above claim(s) 20-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-19, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicant's response of 11/1/04 has been considered with the following results.

Claims 20-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5/21/04.

Specification

The new title of the invention is greatly appreciated.

Drawings

The drawings were received on 11/1/04. These drawings are approved by the examiner and have been entered.

In the following analysis the examiner has grouped the following claims together, i.e., common subject matter/analysis:

Group A: Claims 1-3,11,12 and 18; two inform. Layers with an offset capability.

Group B: Claims 4-8,13-17,19: two inform. Layers with no offset capability and a desired laser beam diameter.

Group C: Claims 9-10: two inform. Layers with no offset capability.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-2,11,12 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/16320, or alternatively under 35 USC 103 (a) as being obvious thereover.

The following analysis is made:

Claim 1	EP document
A multi-layer record carrier provided	see abstract & paragraphs
with at least two substantially parallel information layers ,	14-17
and capable of being scanned by a single scanning	
device, wherein	
data is written in units of data blocks on	see figure 3 and its description
tracks of said at least two information layers,	
a first guard field being written at a start of a	areas 35 and 36 in figure 3
data block and a second guard field being written	

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at an end of said data block,

characterized in that

said first and second guard fields have lengths

see paragraph 61

such that an end position of said second guard field

of a preceding data block is located within

an area of said first guard field of a succeeding data block.

The examiner relies upon the EP equivalent document since it is in English (EP 1128368A1) as presenting the same disclosure as the WO document.

With respect to independent claims 1 and 11: applicant's attention is drawn to the discussion with respect to figure 3 as well as paragraphs 0001 – 0061. Such passages describe a multilayered optical disc having at least two substantially parallel information layers, the phrase "suitable to be scanned" is interpreted as a desired functional ability, and as further depicted in figure 4 of this document such is indeed capable of being done, i.e., "suitable". Data is written in data blocks. The guard fields are indicated in figure 3 as elements 35 and 36, which straddle the data component 32.

With respect to the ultimate paragraph of claim 1 (and claims 11 and 18), as indicated in paragraph 0061, the information layers can be offset by the noted lengths. Hence, under 102 considerations, the examiner concludes that such limitations are inherently present. That is when the information layers are appropriately offset the claimed limitation is present.

Alternatively, if applicant can convince the examiner that such a limitation is not present inherently, then the examiner would reject the claims as being obvious over the WO document because it teaches offsetting the two information layers within a range, a minimum of 0 and a maximum as noted in paragraph 0061.

It would have been obvious to modify the base system of the WO patent with its teaching of offsetting data layers, motivation is to provide for the appropriate signal readout as desired.

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With respect to claims 2 and 12, this is interpreted as desired results and inherently present or alternatively obvious over the WO document – a minimum length of those parts of the guard fields, which do not overlap, can be so selected.

With respect to claim 18, this is drawn to a recording apparatus having recording and control units to perform the desired functions respectively. Such elements are considered inherently present in the WO document. Alternatively, if applicant can convince the examiner that such elements are not inherently present, then the claim would be rejected under 35 USC 103 as being obvious thereover, since such elements are notoriously old and well known (Official notice) in this environment to perform the appropriate functions. It would have been obvious to modify the base system of WO with the old and well known elements in order to perform the desired ability of recording information onto the disc so as to yield the structure depicted in figure 3 thereof.

Response to Arguments

Applicant's arguments filed 11/1/04 have been fully considered but they are not persuasive. Applicant provides an interpretation with respect to the claim language that is narrower than the claim language. That is, there is no limitation that the end position of said second guard field of a preceding data block is located within an area of said first guard field of a succeeding data block on the same plane, i.e., as argued. The examiner has interpreted the claim language to read upon two distinct layers as analyzed above. The examiner maintains this position.

2. Claims 4,6-8,13,15-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/16320, or alternatively under 35 USC 103 (a) as being obvious thereover further considered with Satoh.

With respect to independent claims 4 and 13, the preamble of this claim is the same as that of independent claims 1 and 11 respectively and no further analysis is made.

With respect to the ultimate paragraph in these claims (same subject matter), it describes a desired length of the guard fields in relation ship to a beam diameter when an optical beam is focused onto the lower of the two layers.

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The examiner concludes that the WO document has such a capability, i.e., the focusing of an optical beam (which has a beam diameter) upon the lower of the two information layers. As further noted in paragraph 0120 of the WO document the in within a range of 20-100 mum in diameter.

Although there is no clear depiction of a minimum length of the guard fields in the WO document, because the document provides for an overlap from 0 to a maximum as discussed in paragraph 0061, and a light beam diameter from 20-100 mum is permitted, that a minimum length as recited if not inherently present is an obvious design capability for optimizing system parameters – see *In re Peterson*, 65 USPQ2nd 1379.

With respect to claim 19, this is drawn to a recording apparatus for yielding the format described in the ultimate paragraph thereof (which is the same as that found in claim 4 above).

The elements recited, radiation source, recording unit and control unit and their respective functions are considered inherently present in the above WO document – see the ability of recording with respect to figure 4.

Alternatively, if applicant can convince the examiner that such elements are not inherently present, then the examiner would reject the claims under 35 USC 103 because the existence of such elements, radiation source, recording unit, and a control unit are considered notoriously old and well known.

It would have been obvious to modify the base system of the WO document with the old and well known components identified above motivation is to provide for the recorded signal format disclosed in the WO document.

With respect to claims 6 and 15, as far as can be deciphered from the WO document, the length of the guard fields in each information layer is equal.

With respect to claims 7 and 16, the guard areas are so located wherein the examiner interprets the address portions as the header, and the length of such are either greater than or equal to half the beam diameter which is discussed in paragraph 0120 (20-110 mum diameter yielding a length from 10-50 mum).

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With respect to claims 8 and 17, the gap lengths as depicted in the WO document meet these claims, (equal length in both information layers).

Response to Arguments

Applicant's arguments filed 11/1/04 have been fully considered but they are not persuasive. The examiner maintains the position as stated above. As noted in paragraph 61 of the EP document, there is disclosed a range from 0 to a max. for overlapping. Furthermore, since there is a beam diameter inherently present -see the above analysis.

As is known in the optical field, TP (track pitch) is the distance between the centers of two adjacent tracks, which includes guard band areas.

Satoh et al discusses a multilayered system, wherein the layers are offset by an appropriate amount, as well as tp – see col. 5 under the heading embodiment III. Since the tp is in this environment is nominally less than 5μm, and from the above the beam spot size runs as described above, the setting of a minimum length for the guard field is considered within the above range and hence it would have been obvious to one of ordinary skill in the art, setting the tp range accordingly in order to permit the offsetting of the planar information recording layers to reduce crosstalk as discussed in Satoh et al.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 above, and further in view of Oguro.

Oguro teaches the ability of having both a pre and post –amble segment/section in this environment (see figure 6 and its disclosure for instance).

It would have been obvious to modify the base system of the above noted WO document with the above additional teaching from Oguro, motivation is to increase the flexibility of the WO document so as to permit use with disc formats of the Oguro type. Such is considered an expansion ability desired in this environment.

Response to Arguments

Applicant's arguments filed 11/1/04 have been fully considered but they are not persuasive. The examiner maintains the position as stated above.

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5. Claims 5,14,25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 4 and 13 above, and further in view of Saito et al.

Saito et al teaches the ability of having/placing/recording dummy data in the appropriate fields to ensure proper synchronization of the information. Applicant's attention is drawn to figure 2 for instance. The examiner concludes the ability of dummy blocks as also teaching dummy data.

It would have been obvious to modify the base system as relied upon above in paragraphs 2 with the additional teaching from Saito et al, motivation is as discussed in Saito et al to provide appropriate synchronization upon use of the information.

Response to Arguments

Applicant's arguments filed 11/1/04 have been fully considered but they are not persuasive. The examiner maintains the position as stated above.

6. Claims 4, 25, 13, 14, 26, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ogawa et al or alternatively under 103 (a) as obvious over EP 1128368A1.

The following analysis is made:

Claim 4	Ogawa et al
A multi-layer record carrier provided	see abstract & col. 2 lines
with at least two substantially parallel information layers,	17-58.
and capable of being scanned by a single scanning	
device, wherein	
data is written in units of data blocks on	see figure 2 and its description
tracks of said at least two information layers,	information is written in blocks
a first guard field being written at a start of a	dummy data region,201 for
data block and a second guard field being written	instance. See below further

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at an end of said data block,

explanation.

characterized in that

said first and second guard fields each have

see discussion with respect to figures

a predetermined minimum length, which is

6 and 9 and col. 16 lines 26 till end.

approximately equal to the sum of half the

diameter of the radiation beam in the upper one of

said at least two information layers when focused

on the lowest one of said at least two information

layers and a maximum allowed misalignment between

the two information layers.

Ogawa et al discloses a multilayered disc wherein data is written in blocks. As disclosed therein, there is a dummy region, which the examiner interprets as the claimed guard field. Although the reference clearly depicts such an area at the beginning of each data block, it is not clear if such an area is found at the end of each block. Nevertheless such regions are provided straddling the index regions 12. The examiner hence concludes that there is indeed a dummy area/region at both the beginning and end of each data block. The examiner equates the dummy area(s) as the claimed guard field(s).

Alternatively, if applicant can convince the examiner that such is not inherently present, then under 103 considerations the examiner would rely upon the teaching from the above noted EP document – see the discussion with respect to the guard fields. Motivation is to use existing signal formatting so as to allow the above system to Ogawa et al to be backward compatible with existing signal processes.

With respect to the desired min. length recitation as found in the ultimate paragraph above, note that col. 16 lines 26 plus (till end of this column at least), The examiner concludes that the required minimum is so met.

With respect to claims 13 (method of) and 10 (apparatus for) they are met by the above reference(s), when the system operates (method) and by the apparatus depicted in Ogawa et al (apparatus claim 10).

Dependent claims 14, 25 and 26 are met by the dummy data.

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Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Response to Arguments

Applicant's arguments with respect to these claims have been considered but are moot in view of the new ground(s) of rejection.

7. Claims 6-8 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 4 and 113 as stated in paragraph 6 above, and further in view of EP 1128368A1.

With respect to claims 6 and 15, as noted in the above Ogawa et al document, various ranges for the dummy areas are provided for. Hence in keeping with *In re Peterson, 65 USPQ2nd 1379* selecting the ranges such that they are equal would be an obvious variant to one of ordinary skill in the art.

With respect to claims 7,8 and 16 and 17, the EP document depicts the gap as noted, wherein as depicted the gap also has a range in relationship with the guard band and selection of such a value would also be an obvious variant.

8. Claims 1,2,3,11,12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1128368A1 further considered with Van Den Enden et al.

The following analysis is made:

Claim 1	EP 1128368I
A multi-layer record carrier provided	see abstract & paragraphs
with at least two substantially parallel information layers ,	14-17
and capable of being scanned by a single scanning	
device, wherein	
data is written in units of data blocks on	see figure 3 and its description
tracks of said at least two information layers,	
a first guard field being written at a start of a	areas 35 and 36 in figure 3

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data block and a second guard field being written

at an end of said data block,

characterized in that

said first and second guard fields have lengths

see paragraph 61, and

such that an end position of said second guard field

alternatively see fig. 7 of Van Den

of a preceding data block is located within

Enden et al.

an area of said first guard field of a succeeding data block.

The EP document is relied upon for the reasons stated above. In keeping with the interpretation argued by applicant, that is that the ultimate paragraph refers to the data blocks in a single plane, note the description of Van Den Ended et al for providing the overlapping of the "linking area". The examiner interprets the "linking" area as the claimed guard field areas.

It would have been obvious to modify the base system of the EP document, so as to ensure proper signal processing as discussed by Van Den Enden et al and provide for the overlapping of the "linking" /guard fields.

Response to Arguments

Applicant's arguments with respect to these claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsukatani et al – plural data blocks in a planar fashion – not multi-layered.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action

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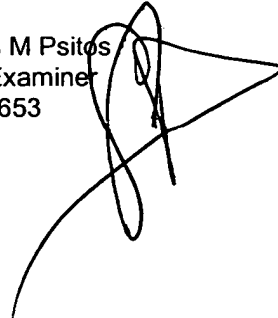
is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2653

A handwritten signature in black ink, consisting of a large, stylized loop and a long, sweeping horizontal stroke extending to the left.

AMP